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Math's Pi-3.14-Becomes Involved in 262 Decimals

Yale Professor Goes On and On and On to Forge Tool of Derived Values That Nobody May Use.

circle—to 215 and 262 decimal places, by the National Academy of Sciences

The results are probably the two biggest numbers ever written. Compared to them the national debt in ennies or the weight of the universe ounces are dwarfish.

Pi is the old friend of grammar be memorized to find the areas of value that it makes no difference for circles. In the physical tables of the any purpose whatsoever. Smithsonian Institution is given the officially accepted figure of 3.14159265359 for any possible uses which an engineer might have for it. The circumference or area of a circle obtained by multiplying the diameter or the radius with this figure would be accurate far instrument to detect the difference.

200 Tedius Steps Further. But Dr. Horace S. Uhler of Yale billion-billion - billion - billion -

cares to know the area of a circle with loss of time and energy and the literasuch great exactness had better be ture of large numbers abounds in Dr. Uhler does not actually calcu-

square of pi.

Impossible Is Sought. For centuries there have been futile efforts to "square the circle"—that is,

the practical area which can be found Calculations of the log and square easily enough. The problem is admitof the constant pi—the ratio between tedly impossible. It would be possible the diameter and circumference of a only if an exact, final value could be found for the elusive pi. But it is respectively, have just been announced obvious to mathematicians that the constant would not "come out even." in the terms of the school boy, in a million years or a billion years. There still would be a remainder which couldn't be gotten rid of. It is possible only to come closer and closer to the area by obtaining successively finer and finer values of the constant school arithmetic-3.14-which must until finally one is so close to the real

A circle might be considered as the area inclosed within an infinite numwhich is supposed to be exact enough | ber of straight lines. The exact area of any figure bounded by straight lines can be determined by making each of these straight lines the base of an imaginary triangle. But obviously this cannot be done when the number beyond the possibilities of any human of bases is infinite. That is why pi will never come out right.

Forges Mathematical Tool. The value of Dr. Uhler's titanic University has gone about 200 steps arithmetical job is not for the present further. He carries it out to the and not for any of the ordinary pillion-billion-billion - billion - billion - affairs of life. There is hardly a billion-billion-billion - billion - billion - possibility of anybody wanting to know billion-billion-billion - billion - billion - the circumference or area of a circle with anything like the exactness which billion-billion-billion - billion - billion - the new pi values make possible. But pillion-billion-billionth place. Every nobody knows when, in theoretical figure of this titanic calculation has physics, such a need might arise and been checked and rechecked. There he has forged a tool which can be may be a slight error in the last digit, used for the purpose. In such a case, he admits in his report to the National he says in his report, "even a single Academy, which is printed in the false digit in the published value of a current journal, and anybody who basic constant can cause incalculable

Most of the work was done with a late the value of pi itself. His re- calculating machine, but the calculasults are for various derived values— tions were repeated several times to the logs of pi and of the different ele- check against one another. Those ments used in arriving at the ratio, the parts of it which were done on paper value of one divided by pi and the were repeated after considerable intervals to guard against any errors which might have crept in.

erroneous figures.

Dr. Uhler took as his formula for the value of pi one worked out by the to work out a fermula for determining Hindu mathematician Srinevasa Rathe exact area of a circle rather than manujan, considered one of the great 1420 K St.

which was published in 1927. It is 355 divided by 113, times 1 minus .0003 divided by 3533, times the difference between 1 and .347,000,000,000,000.-

Anybody who is a little doubtful about pi can figure it out for himself sylvanian Says.

Ickes Asks Condemnation Action on First Land Occupied Under 1862 Act.

TO BE BOUGHT BY U. S.

PIONEER HOMESTEAD

by this formula.

Secretary of the Interior Ickes yesterday requested Attorney General Cummings to institute condemnation proceedings against the land occupied by the first homestead entered under President Lincoln's General Homestead Act of May 20, 1862.

The land, in Gage County, Nebr., vill be included in the proposed Homestead National Monument of America, authorized by Congress March 19, 1936. The entry was made by Daniel Freeman, a soldier of the Union Army, on January 1, 1863, and was the first of more than a million homestead filings.

The monument, Secretary Ickes said, will be a memorial to Abraham Lincoln's interest in helping the "average man" and to the "hardships through which the early settlers passed in developing the West." The plan calls for erection of a museum in which literature and artifacts of pioneer days will be preserved.

DEBATE TOMORROW

Y. M. C. A. to Meet Team From

University of Pennsylvania. The Young Men's Christian Association's debate team will meet a team from the University of Pennsylvania

'Y" Building, 1736 G street N.W. The subject will be, "Resolved: That the National Labor Relations Board be empowered to enforce compulsory arbitration of all labor disputes." The "Y" team will be composed of Lester E. Hurt and John C. Kelley.

at 8:30 p.m. tomorrow in the Central

Gregg Shorthand New Class Forming Feb. 14, 7:45 P.M.

Temple School

WILSON COLLEGE HEAD ADDRESSES D. C. ALUMNI

Small Institutions Holding Own in Educational Field, Penn-

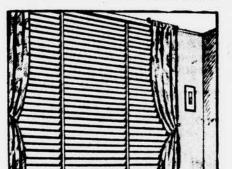
The small liberal arts college is holding its own despite the American tendency to worship size and numbers, Paul Swain Havens, president of

told members of the Wilson Club of Washington at a dinner in his honor at the American Association of University Women Clubhouse last night. Dr. Havens pointed out that the 1,000 or fewer students is far in excess of those enrolling more and most of them are privately owned.

England's Physical Pitness Campaign disclosed several London grandmothers who every day touch the Wilson College, Chambersburg, Pa., top of their heads with their toes.



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Don't let the CAMEO's small size and low price deceive you. It's a piano with a delightful tone and fine action, worthy of any home. Though only 35"high, 21" deep, and 55" wide, it has a standard-height, full 88-note keyboard. You can play any standard musical composition, including the classics, on the CAMEO. And it is superbly finished in beautiful mahogany or walnut.

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Specially Priced at \$245 A SMALLER PROFIT FOR US-A BIGGER BARGAIN FOR YOU

This sensational CO-OPERATIVE SALE is the result of a special arrangement between Winter & Company and ourselves with the aim of offering the greatest PIANO VALUE ever presented to the public.

We, too, are doing our part - sacrificing our profits -to make this extraordinary offer possible. You will understand that if 150 people came into our store tomorrow and purchased 150 pianos, all the same make and model, we could afford to sell them for less than the regular price. We could take a smaller percentage of profit because only a single day's rent, light, salesmen's salaries and other overhead would have to be charged against the transaction. Now, we don't expect to move all of these CAMEO pianos in one day - even at this special price and on these spectacularly generous terms (\$10 down-\$5 a month) — but we know that it will be only a matter of a few weeks before these 150 CAMEO pianos will be sold.

And WE profit by this sale as well as YOU. For it will increase our volume of business. We will make many new friends. We will sell pianos to many people who would otherwise have thought they could not af-

Check the 4 High Spots of this tempting offer (see box at right).

Come in tomorrow—the first day of the sale and SEE and PLAY the CAMEO. Or if that is not convenient, mail the coupon below for a photograph and detailed description of this beautiful little piano. But we warn you, don't delay. There are only 150 CAMEO Pianos to be sold at this price and on these terms. And it's first come, first served!

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- EXCHANGE PRIVILEGE. You may exchange this piano at any time within one year from date of purchase for a Mason & Hamlin, Chickering, Musette, Huntington, Story & Clark or any other piano we carryreceiving full credit for all money paid by
- 4. GUARANTEE. A 5-year written guarantee, signed by Winter & Company as well as ourselves, goes with each of these CAMEO Pianos.

Please mail me at once photograph and full description of the specially priced CAMEO PIANO which goes on sale Feb. 14 in accordance with the terms of your SPECIAL

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before audiences of any size

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The originator and director of this course was awarded an L. C. Roberts Fellowship for advanced study at Columbia University, New York, in 1922-1923. He has served as special lecturer at the Walton School of Commerce and at Loyola University, Chicago. Companies and organizations which have benefited from his instruction and talks include such as the White Motor Truck Co.; Butler Brothers, Baltimore; The Glens Falls Insurance Co.; The Financial Advertisers' Association of America, and The Safe Deposit Association of Washington, D. C.

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